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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/091,300

06/16/1998

WOLFGANG VON DEYN

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4798

26474

7590

04/22/2013

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EXAMINER

HAVLIN, ROBERT H

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

04/22/2013

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/091,300	Applicant(s) VON DEYN ET AL.
	Examiner ROBERT HAVLIN	Art Unit 1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2013.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,28,30,36 and 53-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,28,30,36 and 53-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|---|---|

DETAILED ACTION

RCE: A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/22/13 has been entered.

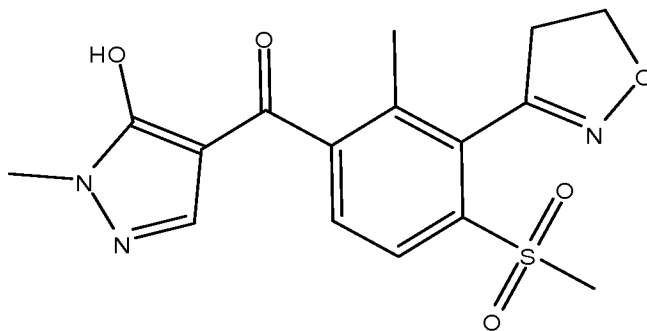
Status of the claims: Claims 21, 28, 30, 36 and 53-55 are currently pending.

Priority: This application is a 371 of PCT/EP98/00069 (01/08/1998) and claims foreign priority to GERMANY 197 01 446.1 (01/17/1997). A certified copy of the foreign priority document is now of record (filed 5/19/2010).

Election/Restrictions

1. Applicant previously elected Group I (claims 18, 20, 21, 28-31, 34-42, and 46-52) and the species of claim 30 having the following structure:

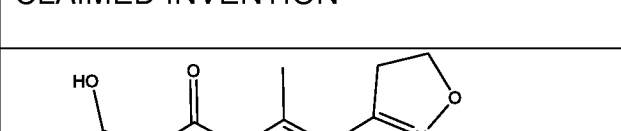
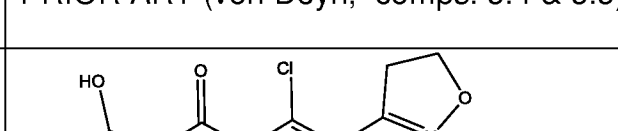
4-[2-Methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole



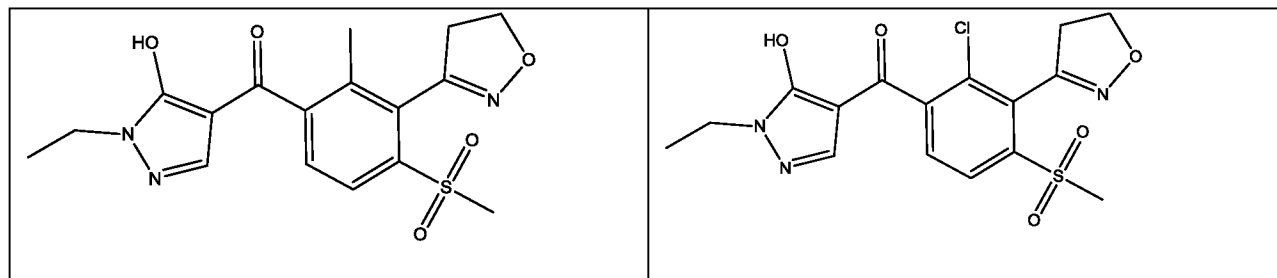
Should applicant, in response to this rejection of the Markush-type claim, overcome the rejection through amendment, the amended Markush-type claim will be reexamined to the extent necessary to determine patentability of the Markush-type claim. See MPEP 803.02.

Claim Rejections – 35 USC 103

2. Claims 21, 28, 30, and 36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Von Deyn et al. (WO 96/26206 [English equivalent US 5,846,907]) in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51). **This rejection is amended to be further in view of US 5,175,299 and US 5,466,660.**

CLAIMED INVENTION	PRIOR ART (von Deyn, comps. 5.4 & 5.5)
	

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Applicant argues that they have shown that the results, supported by declaration, were unexpected and unobvious. Applicant's argument that one of ordinary skill in the art would expect changing a Cl to Me group would reduce herbicidal efficacy is not persuasive. Applicant cites to US 4,405,357 and argues that it establishes that a change to Me from Cl would be reduce herbicidal activity. This argument is not persuasive because it is inconsistent with the teaching of Silverman and the prior art as a whole. There are a number of examples in the prior art that are closely structurally related to the Von Deyn prior art that establish that such a change results in a herbicidal compound that has the same or even better herbicidal activity.

For example, in US 5,175,299 compounds 1 has a Me at "X" while compound 20 has a Cl at "X",

TABLE 3

Compound No.	A	B	X	Y	Z	Q
1	Me	H	Me	CH ₂ OMe	SO ₂ Me	H
20	Me	H	Cl	CH ₂ OMe	SO ₂ Me	H

and yet the measured herbicidal efficacy was the same for the two compounds:

TABLE 6

Compound No.	Dose	EC	SE	EL	DI	PA	AB	AM	PO	CY	ZE
1	0.5	5	5	5	5	5	5	5	5	5	0
	1	5	5	5	5	5	5	5	5	5	0
	2	5	5	5	5	5	5	5	5	5	0
20	0.5	5	5	5	5	5	5	5	5	5	0
	1	5	5	5	5	5	5	5	5	5	0
	2	5	5	5	5	5	5	5	5	5	0

And for example in US 5,466,660, compounds 4 has a Cl at "Y" while compound 6 has a CH₃ at "Y",

TABLE 1

(D)

Compound No.	X	Y	R ¹	R ²	physico-chemical data
4	Cl	Cl	C ₂ H ₅ -n	C ₂ H ₅ -n	n _D ²⁰ 1.5403
6	Cl	CH ₃	C ₂ H ₅ -n	C ₂ H ₅ -n	n _D ²⁰ 1.5248

and yet the measured herbicidal efficacy was greater or the same when the Cl was changed to a CH3:

TABLE 2

Test Compound	Dosage of Active Compound kg/ha	Herbicidal effect						Phytotoxicity Rice
		Echinochloa	Cyperus	Scirpus	Monochooria	Broad leaf weeds	Sagittaria	
4	0.3	100	100	90	100	80	20	20
	0.15	80	100	80	90	70	0	0
6	0.3	100	100	100	100	100	50	20
	0.15	80	100	80	90	70	0	0

Therefore, when the teaching of the prior art is taken as a whole and combined with the knowledge and experience of one of ordinary skill in the art, and as suggested by Silverman, the replacement of Cl with Me is generally expected to result in compounds with similar utility.

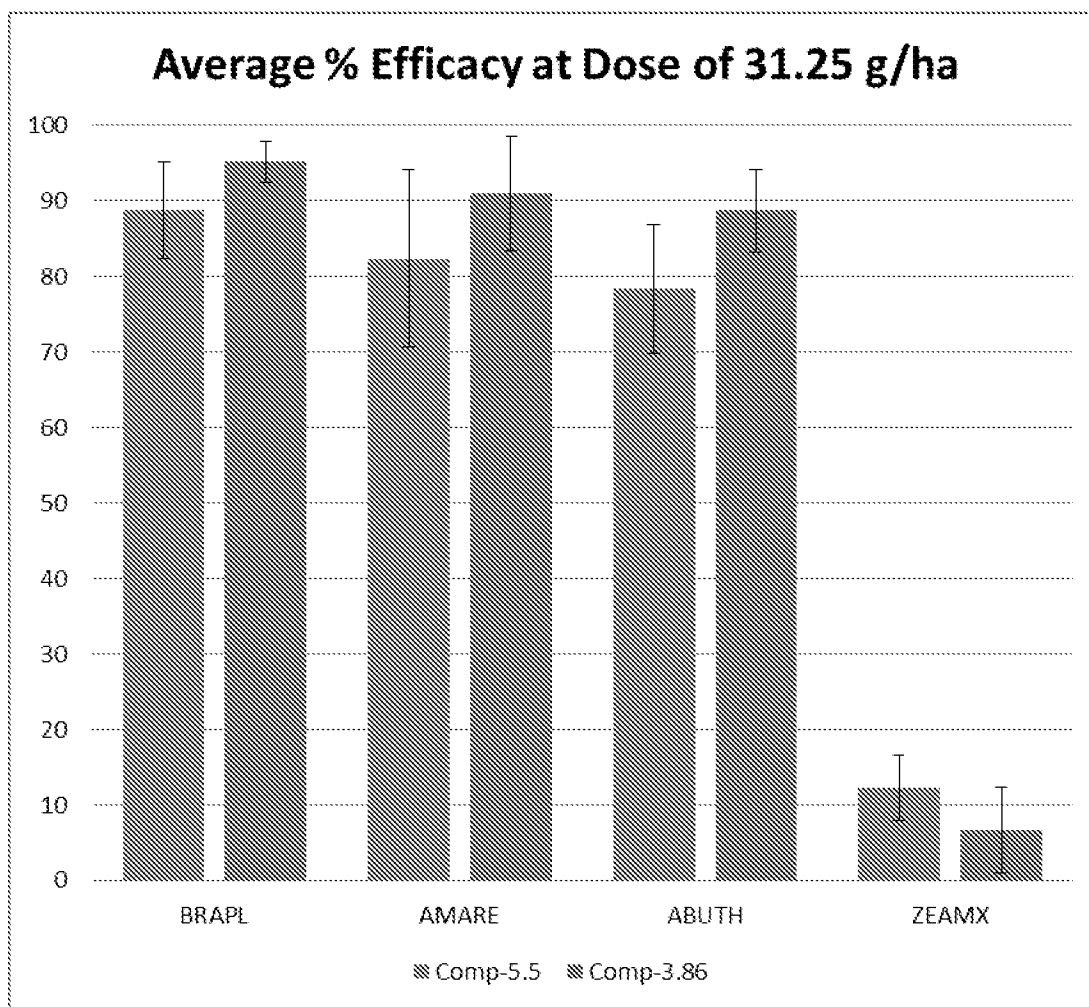
Applicant also presented data (page 7) regarding the phytotoxic effect of changing the oxazolyl group to a thiazolyl group and argues that the oxazolyl compound is less effective in certain respects and that phytotoxic effects are consonant with herbicidal efficacy. This argument is not persuasive because the the compounds differ by more than just the heterocyclic group and one of ordinary skill in the art would recognize both factors as having an effect. Regardless, the differences in the two compounds are such that one of ordinary skill in the art would consider the change marginal.

Applicant argues that they have shown that the results supported by declaration were of both statistical and practical significance. The Examiner has reviewed the data,

the declaration, and Applicant's explanation and is not persuaded that there is an unexpected result of statistical and practical significance.

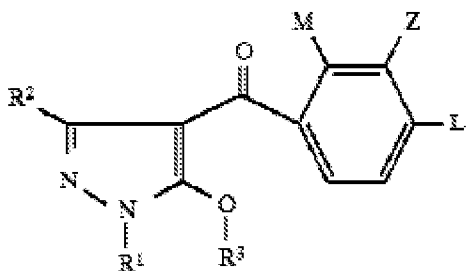
Regarding the statistical analysis presented in the Declaration, applicant appears to have fit the data to a model and introduced an additional unmeasured data point at zero (page of declaration). No fit parameters are provided, instead the declarant uses the model to predict the original values (as a function of application rate) and performs an F-test of the null hypothesis (that the two compounds exhibit identical efficacy). The Examiner performed a simple analysis of the raw data and found errors in the analysis such as in Table 1, compound 5.5 at 31.2 g/ha for AMARE is reported as "77" while the actual average is 82.3; also in Table 1, compound 3.86 at 31.2 g/ha for AMARE is reported as "92" while the actual average is 91.0; in Table 1, compound 5.5 at 31.2 g/ha for ABUTH is reported as "80" while the actual average is 78.3; in Table 1, compound 5.5 at 31.2 g/ha for ZEAMX is reported as "10" while the actual average is 12.2; in Table 1, compound 3.86 at 31.2 g/ha for AMARE is reported as "6" while the actual average is 6.7. There are numerous errors that were discovered in this single row of data and the Examiner has not checked all of the Declarant's work (both because it is clear that there are unexplained errors).

Regardless of the accuracy of the declarant's analysis, it neglects the measurement error clearly evident from a simple analysis of the raw data (presumably the most accurate) where the error bars are the 95% confidence interval derived from the standard deviation:



As can be readily seen from the chart above, the average of measurements include an intrinsic error that when properly accounted for shows that the averages overlap. In addition, the statement in the declaration at “5)” and “5.a)” that it is statistically probable that compound 3.86 is more active than the prior art compound 5.5 is not convincing to support a conclusion that the claimed invention shows an unexpected result. This is because the analysis only looked at whether the null hypothesis was rejected – i.e. only that the numbers were different. One of ordinary skill in the art would expect that two compounds would have somewhat varying levels of activity (rejection of the null

Applicant next argues that Von Deyn when taken alone does not “delineate or suggest a small genus of compounds.” Page 9. Von Deyn teaches a genus of compounds that one of ordinary skill in the art could routinely produce and screen for activity. As shown Von Deyn Table 5 and claim 4 (of ‘907), the prior art directs one of ordinary skill to a small genus which includes the instantly claimed invention. Von Deyn teaches a genus of compounds of the formula



where C1-6-alkyl is listed as a preferred alternative

for M (col. 4 of the '907 patent), M as methyl is given as a specific example (col. 11), claim 4 lists methyl and chloro as among a few alternatives for M, and Tables 1-5 show that nearly all embodiments have M as Chloro or Methyl which shows the interchangeability of the two alternatives. This disclosure is a sufficiently small genus that one of ordinary skill in the art when reading von Deyn and applying their ordinary skill and knowledge would expect that modifying the Chloro group of compounds 5.4 and 5.5 to a methyl group would maintain the activity taught by the prior art. In addition, such a modification is within the scope of what von Deyn teaches as being an active compound. Furthermore, Silverman teaches that one of ordinary skill in the art routinely

makes such modifications to optimize utility. Thus, one of ordinary skill in the art was sufficiently apprised of the subject matter to practice the instant invention because the compound covered by a small genus and one of ordinary skill in the art would expect herbicidal activity of each of the members. Thus, Von Deyn, alone, does suggest the specific molecular modification.

Applicant also argues that one of ordinary skill in the art would not focus on the compound of Table 5 and ignore the remainder of the prior art. Applicant's argument is essentially that the prior art needed to identify a single lead compound. The PTO has clearly indicated that the *Procter & Gamble* decision stands for the proposition that identification of a single compound is not required in a finding of obviousness.

"Examination Guidelines Update: Developments in the Obviousness Inquiry after *KSR v. Teleflex*," 75 Federal Register 53643, 53652 (September 1, 2010) (describing *Procter and Gamble* as: "Teaching point: It is not necessary to select a single compound as a 'lead compound.'"); *Procter & Gamble Co. v. Teva Pharmaceuticals USA, Inc.*, 566 F.3d 989, 995 (Fed. Cir. 2009).

MPEP § 2144.09 establishes factors to consider in evaluating obviousness in structural similarity cases (emphasis added):

A prima facie case of obviousness may be made when chemical compounds have very close structural similarities and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991) (discussed below and in MPEP § 2144) for an extensive review of the case law pertaining to obviousness based

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on close structural similarity of chemical compounds. See also MPEP § 2144.08, paragraph II.A.4.(c).

Compounds which are position isomers (compounds having the same radicals in physically different positions on the same nucleus) or homologs (compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH₂- groups) are generally of sufficiently close structural similarity that there is a presumed expectation that such compounds possess similar properties. In re Wilder, 563 F.2d 457, 195 USPQ 426 (CCPA 1977). See also In re May, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978) (stereoisomers prima facie obvious). Isomers having the same empirical formula but different structures are not necessarily considered equivalent by chemists skilled in the art and therefore are not necessarily suggestive of each other. Ex parte Mowry, 91 USPQ 219 (Bd. App. 1950) (claimed cyclohexylstyrene not prima facie obvious over prior art isohexylstyrene). Similarly, homologs which are far removed from adjacent homologs may not be expected to have similar properties. In re Mills, 281 F.2d 218, 126 USPQ 513 (CCPA 1960) (prior art disclosure of C8 to C12 alkyl sulfates was not sufficient to render prima facie obvious claimed C1 alkyl sulfate). Homology and isomerism involve close structural similarity which must be considered with all other relevant facts in determining the issue of obviousness. In re Mills, 281 F.2d 218, 126 USPQ 513 (CCPA 1960); In re Wiechert, 370 F.2d 927, 152 USPQ 247 (CCPA 1967). Homology should not be automatically equated with prima facie obviousness because the claimed invention and the prior art must each be viewed "as a whole." In re Langer, 465 F.2d 896, 175 USPQ 169 (CCPA 1972) (Claims to a polymerization process using a sterically hindered amine were held unobvious over a similar prior art process because the prior art disclosed a large number of unhindered amines and only one sterically hindered amine (which differed from a claimed amine by 3 carbon atoms), and therefore the reference as a whole did not apprise the ordinary artisan of the significance of hindered amines as a class.).

...

The presumption of obviousness based on a reference disclosing structurally similar compounds may be overcome where there is evidence showing there is no reasonable expectation of similar properties in structurally similar compounds. In re May, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978) (appellant produced sufficient evidence to establish a substantial degree of unpredictability in the pertinent art area, and thereby rebutted the presumption that structurally similar compounds have similar properties); In re Schechter, 205 F.2d 185, 98 USPQ 144 (CCPA 1953). See also Ex parte Blattner, 2 USPQ2d 2047 (Bd. Pat. App. & Inter. 1987)

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(Claims directed to compounds containing a 7-membered ring were rejected as prima facie obvious over a reference which taught 5- and 6-membered ring homologs of the claimed compounds. The Board reversed the rejection because the prior art taught that the compounds containing a 5-membered ring possessed the opposite utility of the compounds containing the 6-membered ring, undermining the examiner's asserted prima facie case arising from an expectation of similar results in the claimed compounds which contain a 7-membered ring.).

Furthremore, considering the additional instruction in the MPEP § 2144.08 II.A.4.c

(c) Consider the Teachings of Structural Similarity

Consider any teachings of a "typical," "preferred," or "optimum" species or subgenus within the disclosed genus. If such a species or subgenus is structurally similar to that claimed, its disclosure may *>provide a reason for< one of ordinary skill in the art to choose the claimed species or subgenus from the genus, based on the reasonable expectation that structurally similar species usually have similar properties. See, e.g., Dillon, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also Deuel, 51 F.3d at 1558, 34 USPQ2d at 1214 ("Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds. For example, a prior art compound may suggest its homologs because homologs often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties."). ** In making an obviousness determination, Office personnel should consider the number of variables which must be selected or modified, and the nature and significance of the differences between the prior art and the claimed invention. See, e.g., In re Jones, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (reversing obviousness rejection of novel dicamba salt with acyclic structure over broad prior art genus encompassing claimed salt, where disclosed examples of genus were dissimilar in structure, lacking an ether linkage or being cyclic); In re Susi, 440 F.2d 442, 445, 169 USPQ 423, 425 (CCPA 1971) (the difference from the particularly preferred subgenus of the prior art was a hydroxyl group, a difference conceded by applicant "to be of little importance").

...

The closer the physical and chemical similarities between the claimed species or subgenus and any exemplary species or subgenus disclosed in the prior art, the greater the expectation that the claimed subject matter will function in an equivalent manner to the genus. See, e.g., Dillon, 919 F.2d at 696, 16 USPQ2d at 1904 (and cases cited therein). Cf. Baird, 16 F.3d at 382-83, 29 USPQ2d at 1552 (disclosure of dissimilar species can

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provide teaching away). Similarly, consider any teaching or suggestion in the reference of a preferred species or subgenus that is significantly different in structure from the claimed species or subgenus. Such a teaching may weigh against selecting the claimed species or subgenus and thus against a determination of obviousness. Baird, 16 F.3d at 382-83, 29 USPQ2d at 1552 (reversing obviousness rejection of species in view of large size of genus and disclosed "optimum" species which differed greatly from and were more complex than the claimed species); Jones, 958 F.2d at 350, 21 USPQ2d at 1943 (reversing obviousness rejection of novel dicamba salt with acyclic structure over broad prior art genus encompassing claimed salt, where disclosed examples of genus were dissimilar in structure, lacking an ether linkage or being cyclic). For example, teachings of preferred species of a complex nature within a disclosed genus may motivate an artisan of ordinary skill to make similar complex species and thus teach away from making simple species within the genus. Baird, 16 F.3d at 382, 29 USPQ2d at 1552. See also Jones, 958 F.2d at 350, 21 USPQ2d at 1943 (disclosed salts of genus held not sufficiently similar in structure to render claimed species prima facie obvious).

Concepts used to analyze the structural similarity of chemical compounds in other types of chemical cases are equally useful in analyzing genus-species cases. For example, a claimed tetra-orthoester fuel composition was held to be obvious in light of a prior art tri-orthoester fuel composition based on their structural and chemical similarity and similar use as fuel additives. Dillon, 919 F.2d at 692-93, 16 USPQ2d at 1900-02. Likewise, claims to amitriptyline used as an antidepressant were held obvious in light of the structural similarity to imipramine, a known antidepressant prior art compound, where both compounds were tricyclic dibenzo compounds and differed structurally only in the replacement of the unsaturated carbon atom in the center ring of amitriptyline with a nitrogen atom in imipramine. In re Merck & Co., 800 F.2d 1091, 1096-97, 231 USPQ 375, 378-79 (Fed. Cir. 1986). Other structural similarities have been found to support a prima facie case of obviousness. See, e.g., In re May, 574 F.2d 1082, 1093-95, 197 USPQ 601, 610-11 (CCPA 1978) (stereoisomers); In re Wilder, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977) (adjacent homologs and structural isomers); In re Hoch, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (CCPA 1970) (acid and ethyl ester); In re Druey, 319 F.2d 237, 240, 138 USPQ 39, 41 (CCPA 1963) (omission of methyl group from pyrazole ring). Generally, some teaching of a structural similarity will be necessary to suggest selection of the claimed species or subgenus. Id

...

If the claimed invention and the structurally similar prior art species share

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any useful property, that will generally be sufficient to motivate an artisan of ordinary skill to make the claimed species, e.g., id. For example, based on a finding that a tri-orthoester and a tetra-orthoester behave similarly in certain chemical reactions, it has been held that one of ordinary skill in the relevant art would have been motivated to select either structure. 919 F.2d at 692, 16 USPQ2d at 1900-01. In fact, similar properties may normally be presumed when compounds are very close in structure. Dillon, 919 F.2d at 693, 696, 16 USPQ2d at 1901, 1904. See also In re Grabiak, 769 F.2d 729, 731, 226 USPQ 870, 871 (Fed. Cir. 1985) ("When chemical compounds have very close' structural similarities and similar utilities, without more a prima facie case may be made."). Thus, evidence of similar properties or evidence of any useful properties disclosed in the prior art that would be expected to be shared by the claimed invention weighs in favor of a conclusion that the claimed invention would have been obvious. Dillon, 919 F.2d at 697-98, 16 USPQ2d at 1905; In re Wilder, 563 F.2d 457, 461, 195 USPQ 426, 430 (CCPA 1977); In re Linter, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

As the preceding makes clear when there is a very close structural similarity such as simply changing a methyl to a chloro, similar properties are presumed.

In this case, compounds with a Cl substituent and related structures are identified as being active. Thus, one of ordinary skill in the art had a sufficient motivation to make the claimed invention because the prior art claimed a genus encompassing the instant invention as well as provided data showing closely structurally related compounds were active for the same utility.

In conclusion, none of Applicant's arguments are persuasive and the rejection is **maintained** and expanded to include newly presented **claims 53-55 for the reasons of record**.

Double Patenting

3. Claims 21, 28, 30, and 36 were rejected on the ground of

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nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 5,846,907 in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51).

Applicant argues that the claims of '907 fail to suggest the structure of a compound that would lead one of ordinary skill in the art to arrive at Applicant's compound. Claims 1-8 of the '907 patent are to compounds that encompass the claimed invention, in addition the cited compounds 5.4 and 5.5 are a "tangible embodiment within the claim" is a disclosure of the claimed invention. Therefore, referring to compounds 5.4 and 5.5 was proper when determining whether the claims were patentably distinct from the claims of the instant application. Consideration of a "tangible embodiment within the claim" is appropriate and "may be used to determine whether an application claim is merely an obvious variation of an invention claimed in a patent." *In re Basell Poliolefine Italia S.P.A.*, 547 F.3d 1371, 1378-79 (Fed.Cir.2008) (citing *In re Vogel*, 57 C.C.P.A. 920, 422 F.2d 438 (CCPA 1970)). Thus, Applicant's argument is not persuasive that the '907 patent fails to suggest the claimed invention.

Therefore, this rejection is also **maintained** and expanded to include newly presented **claims 53-55 for the reasons of record**.

Conclusion

The claims are not in condition for allowance.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HAVLIN whose telephone number is

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(571)272-9066. The examiner can normally be reached on Mon. - Fri., 9:30am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Joe McKane can be reached at (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Havlin/
Primary Examiner, Art Unit 1626